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ABSTRACT

The United States is recognized as leading the industrialized world in violent death rates. The increase in youth violence is primarily attributable to an increase in the "lethality" and not the "frequency" of violent acts because more crimes are being committed with handguns. This chapter reviews the existing literature on violence prevention programs for children and youth. Highlighted are issues of clinical significance, outcome specificity, moderator effects, and evaluation concerns, followed by a more in-depth discussion of these issues as they relate to future directions. Following this programmatic review, the chapter addresses the strengths and limitations of a risk-focused approach to violence prevention. An alternative model is proposed that builds on the contributions of the risk-focused framework, but goes beyond its limitations. This model emphasizes life course development and situates violence in a broader, dynamic framework of human development. The chapter suggests that by casting violence as a negative developmental outcome, prevention efforts can be geared toward promoting healthy human development via direct services to individuals as well as by reforming the systems and settings in which development unfolds. Finally, the chapter presents a review and critique of the violence prevention goals of the Healthy People 2000 initiative as they relate to the empirical and theoretical perspectives presented, and makes recommendations for linking goals and strategies within a broader developmental model. (Contains 1 note and 52 references.) (SD)

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• *CHAPTER 5* •

Violence Prevention for the 21st Century

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Although the United States is recognized for leading the world in public health and other scientific advances, it is also known for leading the industrialized world in violent death rates, with homicide and suicide accounting for more than 50,000 deaths annually. In addition, 2.2 million people are injured each year by violent assaults (U.S. Department of Health and Human Services, Public Health Service [DHHS], 1995). These rates serve as indicators of a public health crisis that affects all segments of the population, with recent violent crime rates hovering at the highest levels of the past three decades. Of particular concern are the escalating rates of youth violence. For example, from 1985 to 1994, the homicide rates of youth ages 14 to 17 increased by 172% (Fox, 1996).

The increase in youth violence is primarily attributable to an increase in the *lethality* and not the *frequency* of violent acts. Indeed, about the same proportion of youth is committing violent offenses today as in 1980, and the frequency of offending is quite comparable (Elliott, 1994). Changed is the lethality of these crimes. A much larger proportion of these crimes involves handguns and

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results in serious injury or death. If current trends continue, the death rate from firearms will surpass that of motor crashes by the year 2003 (DHHS, 1995). Furthermore, rates of serious violent crimes have risen sharply for both African American and White males, but not for females. Given that the population of teenage males is projected to increase by approximately 20% during the next decade, these trends can be expected only to worsen.

It is clear that the challenge for the future is how best to prevent violence, particularly lethal violence, among teenage males. *Healthy People 2000* objectives list six broad areas of concern for reduction of violence related to (a) homicide and assaultive violence, (b) domestic violence, (c) maltreatment of children under age 18, (d) rape and attempted rape, (e) suicide, and (f) firearm injury (DHHS, 1991). In addition, specific risk reduction and services and protection objectives that relate to these broad goals are detailed. For example, these objectives include calls for (a) the reduction of physical fighting among adolescents aged 14 through 17, (b) the reduction of weapon carrying by adolescents aged 14 through 17, and (c) an increase in health education curricula that address conflict resolution and related skills intended to decrease violent and abusive behavior. Many of the objectives of *Healthy People 2000* relate directly to the issue of youth violence and the need for an effective prevention response aimed at the most lethal forms of violence.

To date, there has been a proliferation of prevention programs but relatively little conclusive data regarding their impact, particularly in broad-based strategies for communitywide programming. Efforts also have been hampered by a number of pertinent issues. These include how to determine the "clinical" or real-world significance of changes in correlates of violence, including age-typical antisocial behaviors; the lack of specificity of program impact for specific types of violence (e.g., relationship violence versus predatory violence); the extent to-which intervention effects are moderated by other microlevel and macrolevel factors; and limitations of evaluation measures and methods. Of particular importance are the shortcomings of risk-focused approaches to prevention that have virtually dominated the field during the last decade and the need to situate comprehensive violence prevention strategies in an interdisciplinary framework that is sensitive to the dynamics of human development in multiple social settings through time.

In this chapter, we first review the existing literature on violence prevention programs for children and youth. This review is intended not to be comprehensive but rather to provide a perch from which to assess how best to define and accomplish violence prevention goals for the 21st century.[1] Because most previous efforts have been directed at preventing or reducing identified risk factors for aggression and violence, we review outcomes studies that relate to specific areas of risk across major developmental periods. We highlight issues of clinical significance (in other words, will programs likely affect serious and/or lethal violence), outcome specificity, moderator effects, and evaluation concerns, followed by a more in-depth discussion of these issues as they relate to future directions.

Following this programmatic review, we revisit the strengths and limitations of a risk-focused approach to violence prevention. We propose an alternative model that builds on the contributions of the risk-focused framework but goes beyond its limitations. This model emphasizes life course development and situates violence in a broader, dynamic framework of human development. By casting violence as a negative developmental outcome, prevention efforts can be geared toward promoting healthy human development via direct services to individuals as well as by reforming the systems and settings in which development unfolds. Finally, we review and critique the violence prevention goals of *Healthy People 2000* as they relate to the empirical and theoretical perspectives presented and make recommendations for linking goals and strategies within a broader developmental model.

Overview of Preventive Interventions

During the past several decades, a variety of preventive interventions have been implemented and evaluated. These interventions range from prenatal attempts to decrease risk factors such as low birth weight to interventions that teach incarcerated youth alternative thinking strategies in an attempt to reduce recidivism. In many cases, pertinent data have been garnered from interventions that were not originally designed as violence prevention programs but that addressed relevant risk factors and later have been evaluated

for impact on youth violence. Because risk factors and contexts vary by age, the review is organized developmentally.

Pre- and Postnatal Service to Families

Pre- and postnatal interventions address the earliest stages of a child's development. These interventions frequently involve the prevention of childhood problems associated with poor maternal health (such as low birth weight and birth trauma) and inadequate pre- and postnatal care (including a variety of early childhood disorders). At these earliest stages of development, a child's risk is inextricably linked to the mother's or caretaker's behavior and well-being. Thus, these interventions provide educational and support services to mothers with known risk factors such as poverty, young age, or single-parent status.

One frequently cited example of this type of program is the University of Rochester Nurse-Home Visitation Program (Olds, Henderson, Tatelbaum, & Chamberlin, 1986), which provided expectant mothers with home visits from a nurse during the prenatal period until the child's second birthday. The intervention and its immediate aims varied at different points in the child's development. Early home visits included parent education about basic health and nutrition during pregnancy. After the child's birth, parent education focused more on infant development and also included assistance in building support networks and using other health and human service programs.

The intervention had significant short-term effects on maternal and child health. When compared with a similar group of mothers who received only minimal services, mothers in the intervention group experienced more positive health-related outcomes, higher levels of employment, and fewer verifiable cases of child abuse and neglect. Reducing child maltreatment is a goal of *Healthy People 2000* and should be affected by this type of program. In addition, because early maltreatment is a risk factor for later violence and delinquency, such programs may be useful preventive strategies for adolescent violence. This project, however, was primarily concerned with decreasing reliance on welfare, and no long-term outcome data on serious youth violence are available.

A similar program for mothers raising children in high-risk environments, the Yale Child Welfare Research Program, was car-

ried out by Provence and Naylor (1983). This intervention provided prenatal and early infancy home visits by a social worker, who offered a range of medical, financial, and support services. These services were based on the premise that parental stress can impede family functioning, in turn hindering the development of socially adjusted behaviors in children. Ten years after receiving services, intervention mothers were more likely to report a positive emotional atmosphere in the family and were more involved in their children's education than were mothers in a control group. In addition, intervention children were rated less aggressive and less disruptive in class by teachers. These results point toward the positive impact of infant programs on family functioning and the long-term consequences of early intervention in the prevention of aggression. Still, the impact of such programs on serious and/or lethal youth violence has not been established, and it is unlikely that such early programs alone will be sufficient.

Preschool Enrichment Programs

A number of interventions have attempted to provide preschool enrichment, particularly to economically disadvantaged and minority children. The most well known of these enrichment programs is Head Start. In its original form, Head Start consisted of a brief summer preschool experience just prior to kindergarten. The program has since evolved to include family services and now lasts longer. This intervention has resulted in short-term intellectual and social gains for participants (Darlington, Royce, Snipper, Murray, & Lazar, 1980; Lee, Brooks-Gunn, Schnur, & Liaw, 1990).

Two landmark preschool enrichment studies, the Perry Preschool Project and the Houston Parent-Child Development Center, have reported encouraging results using an intensive, well-articulated preschool program. Both projects used random assignment to condition and collected extensive follow-up data. The Perry Preschool Project provided 1 to 2 years of academically oriented preschool education accompanied by frequent home visits and parent meetings. When compared with a nonintervention control group, intervention children displayed lower levels of mental retardation, dropping out of school, and reliance on welfare. In addition, they received better grades; scored better on standardized achievement tests; and had better high school graduation rates, higher

employment, fewer acts of misconduct, and lower arrest rates (Berrueta-Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984; Schweinhart & Weikart, 1988).

Similarly, follow-up studies of children in the Houston Parent-Child Development Program have indicated sustained behavior improvements as measured by reductions in aggression in elementary school (Johnson, 1988; Johnson & Walker, 1987). Still, even these promising results are clouded by concerns such as small sample size and high attrition rates. Although short-term academic gains can be established, their relation to long-term changes in serious adolescent violence is unclear, particularly given the multiple developmental influences that affect children during the early and middle school years.

Another approach to preschool intervention emphasizes building social competencies. For example, the Interpersonal Cognitive Problem-Solving Skills training program designed by Spivack, Shure, and their colleagues (Spivack, Platt, & Shure, 1976; Spivack & Shure, 1974) consists of a series of lessons that focuses primarily on teaching children to generate and evaluate multiple solutions to everyday social problems. Two-year follow-up studies revealed a resulting improvement in cognitive skills and classroom behavior. Replication studies, however, failed to find the same impact on behavioral outcomes (Rickel & Burgio, 1982; Rickel & Lampi, 1981). Thus, these data suggest that through appropriate intervention, preschool skills associated with nondelinquent behavior, such as the ability to generate various solutions to social problems, can be taught. It is unclear, however, if this produces long-term changes in relevant behavioral outcomes, particularly as related to more serious violent behavior later in development.

Interventions During the Elementary School Years

As children grow older, their exposure to multiple contexts increases, and the etiology of violence becomes more complex. Although the family continues to play a key role in development, the school now becomes a primary socialization context, and the influence of the peer group increases. Relevant variables for this age group include academic and social development, relations with family members and peers, and the ability to behave appropriately in an increasing number of contexts. This diversity of risk factors

and salient contexts is reflected in the diversity of interventions used with this age group. Some interventions are predominantly child centered and skill based, addressing the skills and competencies directly through instructional interventions. Other programs address these skills indirectly by educating teachers and parents about how to manage children's behavior and enhance relationships. Although some programs have demonstrated modest gains in targeted competencies, others have been less successful, and results have been discouraging in the most disadvantaged urban settings.

For example, in a study comparing the effects of social problem-solving training for suburban versus inner-city children, Weissberg, Gesten, Rapkin, et al. (1981) provided both groups of children with a 52-session social problem-solving training program. In addition, 6 parent training sessions were offered to reinforce children's skills. Although the suburban middle-class children outperformed control children on a number of cognitive and behavioral skills, the inner-city children actually got worse on some measures and displayed increased aggression. In a second study (Weissberg, Gesten, Carnrike, et al., 1981), a modified social problem-solving training program found uniformly positive effects for both suburban and urban children. The authors attributed these differential results to an improved curriculum, a more timely implementation (earlier in the school year), and an increased emphasis on teacher reinforcement of the curriculum in the handling of everyday conflicts.

A more recent study compared the impact of a similar social development training program for elementary school children in inner-city schools rated as adequate or distressed (Guerra, Eron, Huesmann, Tolan, & Van Acker, 1996). The program was also comprehensive and involved teacher training, classroom instruction, peer relations training, and family intervention. Significant reductions in aggression and increases in prosocial behavior were noted only in the schools rated adequate, with no effects in the most distressed schools (Guerra, Henry, Tolan, Huesmann, & Eron, 1996).

These studies point to the importance of setting as a moderator of intervention effects. Several studies that have examined intervention effects as a function of location, social class, and/or ethnicity suggest that program impact is not uniform. Elementary school interventions designed to build social competencies tend to be least effective for lower-class, urban minority children in the most dis-

advantaged environments (Coie, Underwood, & Lochman, 1991; DuBow, Huesmann, & Eron, 1987; Hawkins, Von Cleve, & Catalano, 1991). Thus, it seems that no one intervention is ideal for all populations in all contexts. It may be that prevention programs are most difficult to develop and implement in the most disorganized settings and that repeated implementations with appropriate modifications are needed to increase effectiveness (Coie et al., 1991; Weissberg, Caplan, & Harwood, 1991).

In addition to child-centered intervention strategies aimed at altering cognitive, social, and academic skills (that may include training parents to help in the process), a number of interventions have focused primarily on training parents of elementary school children in child management and family relations. Perhaps the most well known approach is behavioral parent training aimed at reducing negative parenting and coercive interactions. Several studies have reported decreases in children's antisocial behavior following intervention (Patterson, 1986; Patterson, Reid, & Dishion, 1992; Wahler & Dumas, 1987). More recent studies have also examined how environmental constraints modify or limit intervention effects. For example, Wahler and Dumas (1989) report that the overwhelming demands single mothers face can produce quicker relapses to old child-rearing methods, even after successful completion of parent training. Thus, external stress can limit the effectiveness of family interventions.

An additional issue that surfaces during the elementary school years is whether and how to identify selected children for targeted preventive interventions. One strategy is to provide a *universal* intervention for all children in a classroom or school. Although populations can be selected on the basis of certain risk factors (e.g., poverty), this method cannot be sensitive to differences in individual factors and/or potential differential effects of the intervention. Overall, it is assumed that what is provided is likely to help everyone and not hurt anyone. It is unlikely, however, that such programs will produce dramatic change or affect the more extremely aggressive children, and evaluations of universal interventions have paid little attention to their differential effects.

An alternate approach has been to identify children on the basis of some marker of at-risk status, often concurrent level of aggression. *Selected* programs attempt to reduce prevalence at a given time to prevent future involvement, and *indicated* programs target

youth already involved in serious antisocial behavior (Gordon, 1983). This strategy has the advantage of allowing for more intensive and focused services for youth who are more troubled. Although behavior during the elementary years is among the best predictors of later behavior, it is still only a weak predictor, however, and many children desist on their own. Therefore, interventions are provided for children who may not need them. This clearly points to the need to be quite vigilant about examining any possible iatrogenic or harmful effects of particular programs.

In summary, research has not suggested a single best approach to identifying and intervening with elementary school children to prevent youth violence. Many different approaches have displayed some success, however. Programs that directly teach specific social and cognitive skills while including parents and teachers as participants in this process have proved successful for some populations. Improving relationships between parents and children has also proved promising. Concerns about clinical significance for more disruptive children, iatrogenic effects, and potential moderators of intervention impact must be addressed for this age group.

Programs for Adolescents

Although some universal programs have been provided for adolescents, prevention efforts for this age group tend to become more targeted because of the marked increase in identified problem behavior incidents (e.g., arrests for delinquent acts). Most interventions for adolescents have been carried out as treatment programs, often involving adjudicated or incarcerated youth (for a review, see Guerra, Tolan, & Hammond, 1994). Unfortunately, as children get older, the magnitude of effects found for such preventive interventions decreases, with evidence suggesting mean effect sizes of about 0.2 (see Tremblay & Craig, 1995).

Universal interventions most frequently involve either skill training programs or efforts to modify the classroom or school environment. In one example of a skill-training program, Sarason and Sarason (1981) implemented a 13-week social problem-solving training program as part of the curriculum in an urban high school. When compared with no-treatment controls, students who received the intervention exhibited fewer absences and decreases in office referrals for inappropriate behavior along with increased social

problem-solving skills. The impact on serious violent behavior was not assessed, however, and long-term follow-up evaluations were not conducted. To date, there is little conclusive evidence to support the use of classroom-based curricula for prevention of serious adolescent violence.

Other attempts have focused on modifying school environment. For example, the School Transitional Environmental Program (STEP) involved reorganizing the school social system in the first year of high school to involve students in a stable peer group (Felner & Adan, 1988). Homeroom teachers were then assigned to act as primary administrators and counselors for particular groups of students. In one set of follow-up studies, students in the STEP program showed lower dropout rates and fewer placements into programs for failing students. They also showed higher grades and fewer absences than did a control group during the first 2 years of high school. Replication studies demonstrated impact on behavioral dysfunction and delinquent behavior.

Gottfredson (1986, 1987) and colleagues have engaged in systematic efforts to alter school organization and management structures in a number of middle schools and high schools. Such programs emphasized efforts to increase participation in school improvement efforts, develop clear disciplinary procedures, and provide activities to enhance students' success experiences and feelings of belonging. Several studies have shown improvements in school climate and decreases in delinquency, with programs being most effective at the high school level (Gottfredson, 1986; Gottfredson, Gottfredson, & Hybl, 1993).

Among the more well known school reform programs affecting adolescents are the efforts undertaken in Norway by Olweus (1994) and colleagues. On the basis of studies suggesting that a select group of adolescent bullies repeatedly target other teenagers, a program was developed to alter environmental norms about bullying. The program included a large-scale campaign and efforts to change school practices. Because the campaign was nationwide, investigators were able to compare only pretest and posttest data, although dosage was available as a variable. Results indicated that reductions in bullying did occur and were directly related to intervention dosage.

Although there is some evidence for the effectiveness of schoolwide or communitywide programming on problem behavior, re-

search designs are weaker than studies of individual behavior, and effects on serious violence have not been established. These programs may be useful in establishing a normative structure for behavior, but youth with more serious behavior problems may warrant more intensive, individualized programs.

Modest success has also been demonstrated with targeted programs for more serious offenders. For example, Guerra and Slaby (1990) conducted a controlled evaluation study with juveniles incarcerated for violent crimes. Small groups that focused on changing the beliefs and attitudes about the legitimacy of violent responses to conflict were conducted. Participants in the treatment group exhibited decreases in aggression after the intervention, when compared with no-treatment and attention-only control groups.

A growing body of evidence supports the effectiveness of intensive family interventions. The work of Patterson (1982, 1986) and colleagues (Patterson, Chamberlain, & Reid, 1982), discussed previously, has also been extended to adolescents. More recently, Henggeler (1989) and associates (Henggeler & Borduin, 1990) have developed a comprehensive family intervention for serious juvenile offenders. This program, Multisystemic Family Therapy (MST), focuses on improving parent practices and family cohesion as well as helping the family develop skills to address external demands. In several experimental studies using random assignment to condition, MST participants reported less delinquent behavior and had fewer subsequent arrests and fewer weeks of subsequent incarceration.

Of course, it would be shortsighted to discuss current status and future directions for prevention of serious youth violence without addressing the influence of the antisocial peer group and, in particular, juvenile gangs. Because of the well-documented influence of antisocial peers on youth violence, a number of interventions have targeted directly these peer group influences. Such programs frequently provide some type of group therapy or structured group program, often with the goal of restructuring peer interactions to increase conformity to prosocial norms. Many programs have been modeled on the Guided Group Interaction technique. Many of these programs have demonstrated no effects or negative effects on antisocial behavior when groups were composed of only problem youth; some decreases in antisocial behavior have been reported,

however, when delinquent and nondelinquent youth were in mixed groups (Feldman, 1992; Gottfredson, 1987). As this suggests, the impact of group interventions may be related directly to moderating factors such as the composition of the treatment group.

Given the magnitude of the juvenile gang problem and its association with the most lethal forms of youth violence, the paucity of effective strategies in this area is alarming. Gang prevention programs have been implemented and evaluated since the 1930s, with few positive outcomes. In particular, single-component programs such as "detached street worker" models or suppression programs have not been successful. Rather, the most promising recent efforts are multicomponent, combining prevention, social intervention, treatment, suppression, and community mobilization in a coordinated effort conducted by community collaborations (Spergel, 1986).

Although not directly related to peer group influences, a number of youth involvement programs have been designed to provide youth with positive role models. Among the most promising programs are mentoring programs. In most such programs, the goals are to assist youth in developing skills and to provide sustained relationships with more experienced persons who serve as mentors. A recent comprehensive evaluation of the Big Brothers/Big Sisters mentoring program conducted by Public/Private Ventures (1995) suggests that a positive mentoring relationship relates to reductions in self-reported behaviors such as hitting and substance use. The most successful programs are also those that provide positive real-life experiences including training to help youth find and keep regular jobs.

Summary of Research on Preventive Interventions

In summary, youth violence prevention programs cover a broad range of activities at different developmental stages. There is little evidence to support striking effects for any one program or type of program. Rather, this review points to the questions researchers should be asking as we evaluate preventive interventions in the coming century and set directions for *Healthy People 2010*. Several major areas of concern were noted in this review and are again discussed briefly.

Key Issues in Evaluating Preventive Interventions

As mentioned earlier, our ability to draw conclusions about the impact of preventive interventions on serious youth violence is limited by several concerns. First, it is important to consider the issue of clinical significance of effects vis-à-vis the ultimate goal of preventing serious and lethal violence. Because some types of aggression are both frequent and age-typical, it is unlikely that reductions in this behavior, (i.e., for the less seriously aggressive children) will have any bearing on more lethal forms of violence. Clearly, aggressive behavior correlates with and predicts later violent behavior, but most aggressive children do not become involved in serious violence. Rather, we must distinguish the impact of prevention programs on the most extremely aggressive children, even if programs are implemented as universal interventions for all children.

A related issue concerns timing of interventions. As the previous review illustrates, violence prevention programs have ranged from postnatal to adolescent interventions. Given limited community resources, however, it is unclear where best to direct efforts. Because serious violent behavior peaks during adolescence and is usually short-lived (between 1 and 3 years), it is difficult to establish long-term benefits on this serious violence of programs offered during infancy and early childhood. Clearly, such programs are important from a youth development perspective, but their long-term impact, if not followed by other preventive strategies, is unclear.

In addition to addressing issues of timing, we must also distinguish intervention effects for different types of violence. Previous reviews of interventions have distinguished between four major types of violence: situational, relationship, predatory, and psychopathological (Tolan & Guerra, 1994b). Situational violence occurs in response to temporary events, such as extreme heat and riots, and reflects situational factors that increase an individual's willingness to use violence or increase the seriousness of the violence that occurs. Relationship violence arises from disputes between persons in relationships. Predatory violence is perpetrated intentionally to obtain personal gain, such as muggings and robbery. A more extreme form of violence, psychopathological violence, is character-

ized by extreme violence and is most likely the result of individual pathology.

Certain interventions should affect certain types of violence but not necessarily affect other types of violence. For example, conflict resolution training should have the greatest effect on interpersonal violence because such behavior arises from conflicts or disputes between individuals. It is unlikely to affect predatory violence, however, because such violence is not related to any preexisting conflict; it is unlikely that the perpetrator even knows his or her victim. Rather than treating *violence* as a global term encompassing any and all forms, future directions should aim at specifying types of violence and likely impact of related interventions.

Even if we were to focus specifically on one type of violence, in any case it is also naive to think that one program would work equally well for all participants. It is critical that intervention evaluations begin to examine carefully the proposed moderators of impact. As discussed previously, several studies have examined these effects and have illuminated conditions under which programs fare best. A compelling example can be found in comparisons of impact for a number of prevention programs in urban versus suburban schools. In almost all cases, skill-based interventions worked better in middle-class suburban schools than in lower-class urban schools, with some programs in the most disadvantaged settings actually causing harm to children. Thus, rather than searching for main effects, we must evaluate the impact of an intervention on different participants on the basis of potential moderators such as income, gender, ethnicity, and setting characteristics. The question is not "what works" but rather "what works for whom and under what conditions."

A continuing concern involves how best to evaluate violence prevention efforts, particularly for their ultimate impact on lethal youth violence. The most carefully evaluated preventive interventions typically have involved university-affiliated investigators who apply their models of behavior and behavior change to a school or community setting. Intervention implementation, however, is often compromised in a number of ways according to the unique features of the setting. In the most disadvantaged communities, problems such as high staff turnover, high student attrition, scarce resources, and other "interventions" that come and go quickly often make evaluation a challenging task. Furthermore, ecological programs

that try to affect whole systems (e.g., schools) are plagued by concerns over how to achieve random assignment to condition and how to account for multilevel or nested effects of context.

In contrast, a myriad of violence prevention programs exist at the community level, with little or no evaluation of any type. These programs usually are quite sensitive to local concerns and community needs but are not necessarily based on a theory of violent behavior or how to effect behavior change. Needed is a blending of theory and practice—programs should be evaluated that are sensitive to both theories of violence and local community needs. Evaluation models such as FORECAST (Goodman & Wandersman, 1994) that involve collaborative efforts and assess both processes and impacts should be considered.

Beyond these issues, it is important to build on past responses to violence and to establish a framework that can effectively guide prevention activities in the 21st century. During the past decade, most violence prevention efforts have evolved from a risk-focused approach involving identification of risk and protective factors and development of related interventions. Clearly, the use of this framework has advanced the science and practice of violence prevention by emphasizing the importance of empirical findings, evaluation, and integration of programs with community efforts.

Still, this approach has a number of limitations. First, the risk-focused approach has led to the specification of "laundry lists" of risk and protective factors. The notion is that they are independent of each other and of equal value so that selecting any two is better than one, and so forth. Relatively little emphasis has been placed on the relative weighing of risk factors in specific populations and communities, although addressing a single strong cause in a given setting may be much more effective than targeting several weak factors. In addition, predicting risk is quite different from predicting behavior change. Longitudinal relations among variables still do not necessarily mean that changing the identified risk marker will result in corresponding changes in behavior.

Second, risk-focused approaches have resulted in a rush to plug in "programs" to influence risk factors, rather than emphasizing changing contexts or systems. Violence becomes an isolated problem, leading to a focus on the selected factors associated with that problem. Prevention plans become strategies to affect identified risk factors. The emphasis is usually on developing interventions

for individuals within social contexts, rather than addressing the dynamics of how individuals navigate multiple and diverse contexts. Unfortunately, the particular risk factors addressed or programs identified often relate to program visibility (for example, the current popularity of peer mediation and conflict resolution programs) rather than an awareness of sets of risk factors and how they interact in a given setting.

Third, applications of the public health framework have successfully identified risk and protective factors in various social contexts, but they have not clearly described how these influences are interconnected through time. As the epidemiological data on youth violence indicate, the onset, desistance, continuity, and types of violence vary by age and are influenced by context. In other words, violence takes different forms during the life course. To develop comprehensive violence prevention responses and strategies that consider these changes through time, a model is needed that situates lethal violence in a broader, dynamic framework of human development.

Life Course Development and Violence Prevention

Rather than focus exclusively on sets of risk or protective factors that contribute to violence in its various forms, an ecological model of life course development model has been proposed and applied to violence prevention (Williams, Guerra, & Elliott, 1996). This model emphasizes factors that support or impede healthy human development during the life course. This approach does not lead to the development of new "programs" but rather to prevention strategies that remove *barriers* and buttress *supports* to prosocial and health-enhancing behavior. These strategies may involve developing new programs, altering social contexts, or reforming systems.

This model is described in depth elsewhere (see Williams et al., 1996). Briefly, it emphasizes how individuals meet developmental needs at each stage in multiple contexts. A careful review of risk and protective factors associated with youth violence indicates that most major risk factors for violence can easily be recast as unmet developmental needs. For example, the lack of a secure infant-caregiver attachment has been linked with risk for early aggression.

From the perspective of the life course model, this attachment is a developmental need of infancy. If unmet, it may predict later aggression and violence as well as a number of other related emotional and behavior problems.

"Risk factors" can thus be understood as barriers for successful human development. An understanding of developmental barriers leads to a focus on prevention as providing developmental supports, in other words, resources, activities, and system changes that help individuals meet developmental needs and/or reduce identified barriers. Supports can be stage-specific or remedial, in that they help meet unmet needs of earlier developmental stages specifically on the basis of the problems of the current developmental stage. For example, an impaired infant-caregiver bond may be manifest during adolescence in difficulties with intimate relationships. Remedial supports would not address directly the infant-caregiver bond but could strengthen family connections and/or relationship skills to address this unmet need.

Another important concept of the life course model centers on transitions and pathways. *Transitions* refer to entry into new developmental stages, and *pathways* refer to the sequencing of transitions and experiences within stages during the life course. Data on the stability of aggression and violence as well as "career" patterns of offending suggest that serious and lethal violence is often the result of difficulties in making transitions to new developmental stages and/or engaging deviant pathways. Timing is also important, in that age-graded transitions that are "off-time" can have negative behavioral consequences. Thus, the life course model provides a dynamic framework from which behavior through time can be understood.

Prevention strategies must also be sensitive to the multiple contexts of development. Not only do individuals develop in multiple contexts, but the relative importance of contexts varies through time. For example, in infancy, the family is the dominant context. During early childhood, the influence of school and peers increases, and during adolescence, the peer group becomes one of the most dominant developmental contexts. In addition, the life course model stresses the importance of the person-in-context interaction. That is, behavior is seen as influenced by both social contexts and the attributes individuals bring to these contexts. Rather than addressing only a set of individual and/or contextual attributes, we

must understand the dynamic interaction between individuals and settings and develop prevention strategies accordingly.

The ecological model of life course development provides a broad framework for understanding violence and developing prevention strategies. It can be applied to program development by focusing on specific developmental needs and related programs to meet these needs. It is suggested, however, primarily as a tool for understanding the development of violent behavior through time and across contexts and for building prevention strategies that are comprehensive and provide for integrating and implementing services to prevent violence by supporting healthy human development.

Violence Prevention for the 21st Century: Reviewing *Healthy People 2000* Goals and Setting New Directions for 2010

Healthy People 2000 sets forth three types of objectives for each area of health-related outcomes: (a) health status objectives, (b) risk reduction objectives, and (c) services and protection objectives. In applying these to violence prevention, it is important to examine the relevance and viability of this categorization and the adequacy of the stated objectives. In addition, there is an urgent need to link any proposed objectives with specific strategies, programs, and activities known to be effective and to detail future research needs. Again, the need for an organizing framework that stresses healthy human development and that can link objectives across outcomes must be considered carefully.

As applied to violence prevention, health status objectives have been translated into a set of *target rates* for different types of violent and abusive behavior. These target rates represent significant reductions from previously reported levels of incidence or prevalence. For example, the first objective is to reduce homicides to no more than 7.2 per 100,000 people from an age-adjusted 1987 baseline of 8.5 per 100,000. A mid-decade review indicates that trends are actually heading in the wrong direction. In 1995, the rate had increased to 10.3 per 100,000 (DHHS, 1995). Given this trend, a critical evaluation of the objectives regarding youth violence is in order.

From the standpoint of patterns and trends in violent behavior, these objectives do not discriminate among types of violence, despite the differing etiologies and prevention strategies associated with differing types. These objectives also do not reflect the need to focus on *serious* and *lethal* violence, particularly among adolescents. The objectives do include, however, reductions in weapon possession, weapon carrying, and firearm-related deaths, as well as enhanced firearm storage laws. This focus on the direct relation of firearms to lethal violence is extremely important and is often neglected in the field of violence prevention programming. Given the high rates of firearms use and violence tied to juvenile gangs, it is surprising that no mention of juvenile gangs appears in the objectives, and this should be addressed. Even more puzzling is the rather arbitrary nature of the recommended reductions and the extent to which the goals have been revised by changing target rates, rather than linking goals with specific strategies and actions that address the multiple causes and pathways to violence.

Within a risk-focused public health framework, delineation of risk reduction objectives linked to violence should be useful. As previously detailed, however, at a minimum, targeted risk factors should reflect the changing nature of violence during the life course and in a given setting. Yet the risk factors targeted in the stated objectives focus only on fighting and weapon carrying by adolescents and improper weapon storage. No mention is made of even the most robust risk factors, and no attempts to detail age-specific risk factors have been made, although an expansive literature details risk for violence and other problem behaviors across the life course.

Services and protection objectives cover a range of system-level responses, including changes in firearm storage laws; extensions of assessment and review systems related to suicide, child maltreatment, and child death; and an increase in emergency housing for battered women. Programmatic goals directly related to youth violence call for an increase to at least 50% in the proportion of schools teaching conflict resolution skills and an extension of comprehensive violence prevention programs to at least 80% of local jurisdictions with populations more than 100,000. This emphasis on the extension of violence prevention programs is an important goal. The weakest link in the violence prevention objectives of *Healthy People 2000,* however, is the failure to integrate

empirical data on effective programs, ineffective programs, and programs in need of more research into a set of recommended strategies and activities that are, in turn, directly linked to stated violence reduction goals, particularly for lethal violence. For instance, blanket endorsement of conflict resolution programs as one of the key violence prevention services objectives is not supported by empirical data. As discussed in this chapter, even when interventions have included conflict resolution training, their effectiveness in reducing serious violence has been limited, and impact has been moderated by factors such as community setting.

Rather than deal in general statements about increasing violence prevention programs, *Healthy People 2010* must focus on the link between goals and strategies and their relation to the changing patterns of violence across the life course. One approach would be first to differentiate categories of violence addressed (i.e., suicide, homicide and serious assaults, child maltreatment, domestic violence, and rape). From a risk-focused perspective, a next step would be to provide epidemiological data to identify those most at risk and to delineate age-specific risk factors that are modifiable through intervention. Recommended interventions that have been empirically supported (including conditions that maximize impact) can then be linked to specific populations and age groups, and a set of developmentally appropriate strategies and activities can be described.

As we have asserted in this chapter, however, risk factors can also be recast as barriers and supports to healthy development, and a broader ecological framework can be applied to the promotion of healthy human development including violence prevention. Many risk factors for violence are common to a range of problems including mental health disorders, substance use, and teenage pregnancy. A comprehensive response should focus on how schools, communities, and service systems can foster social, emotional, and physical health through strategies and activities that help individuals meet their developmental needs across the life course.

Note

1. Several comprehensive reviews are available focusing specifically on violence prevention (e.g., Guerra, Tolan, & Hammond, 1994; Tate, Reppucci, & Mulvey,

1995; Tolan & Guerra, 1994a). Other reviews cover a broader range of antisocial and delinquent behaviors (e.g., Kazdin, 1987; Lipsey, 1992; Tolan & Guerra, 1994b).

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